

CHANGING THE “WAYS” OF THE INSTITUTIONAL ARMY’S LEADER DEVELOPMENT STRATEGY

BY

COLONEL SCOTT KING
United States Army

DISTRIBUTION STATEMENT A:

Approved for Public Release.
Distribution is Unlimited.

USAWC CLASS OF 2011

This SRP is submitted in partial fulfillment of the requirements of the Master of Strategic Studies Degree. The views expressed in this student academic research paper are those of the author and do not reflect the official policy or position of the Department of the Army, Department of Defense, or the U.S. Government.



U.S. Army War College, Carlisle Barracks, PA 17013-5050

The U.S. Army War College is accredited by the Commission on Higher Education of the Middle State Association of Colleges and Schools, 3624 Market Street, Philadelphia, PA 19104, (215) 662-5606. The Commission on Higher Education is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation.

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (DD-MM-YYYY) 24-03/2011		2. REPORT TYPE Strategy Research Project		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE Changing the "Ways" of the Institutional Army's Leader Development Strategy				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Colonel Scott King				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Army War College 122 Forbes Avenue Carlisle, PA 17013				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Distribution A: Unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT The "Ways" of the Institutional Army's Leader Development Strategy must change to accomplish the stated "Ends," including developing agile and adaptive leaders. Specifically, the Institutional Army must change from strict reliance on task-based, input-focused "Ways" to incorporate a skills-based, outcome focused "Ways" to develop agile and adaptive leaders to face the challenges of the current and future environments. Developing agile and adaptive leaders who are critical thinkers is instrumental to the Army's successful conduct of Full Spectrum Operations in the 21st Century. This paper will explore the current and future operational environments, discuss why the Army requires agile and adaptive leaders for these environments, and why the institutional Army is resistant to change its "Ways" of producing such leaders. This paper will offer Outcome Based Training Education (OBTE) as the "Ways" for the Army to reach its "Ends", utilizing the Army Reconnaissance Course as a case study. The paper concludes with recommendations on how the Army, as an institution, should itself be agile and adaptive in making adjustments to help change its organizational culture, resulting in the sustained production of agile and adaptive leaders.					
15. SUBJECT TERMS Outcome Based Training and Education (OBTE), Agile and Adaptive Leaders, 360 Degree Assessment					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UNLIMITED	18. NUMBER OF PAGES 36	19a. NAME OF RESPONSIBLE PERSON
a. REPORT UNCLASSIFIED	b. ABSTRACT UNCLASSIFIED	c. THIS PAGE UNCLASSIFIED			19b. TELEPHONE NUMBER (include area code)

USAWC STRATEGY RESEARCH PROJECT

**CHANGING THE "WAYS" OF THE INSTITUTIONAL ARMY'S LEADER
DEVELOPMENT STRATEGY**

by

Colonel Scott King
United States Army

Colonel John Tisson
Project Adviser

This SRP is submitted in partial fulfillment of the requirements of the Master of Strategic Studies Degree. The U.S. Army War College is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools, 3624 Market Street, Philadelphia, PA 19104, (215) 662-5606. The Commission on Higher Education is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation.

The views expressed in this student academic research paper are those of the author and do not reflect the official policy or position of the Department of the Army, Department of Defense, or the U.S. Government.

U.S. Army War College
CARLISLE BARRACKS, PENNSYLVANIA 17013

ABSTRACT

AUTHOR: Colonel Scott King

TITLE: Changing the "Ways" of the Institutional Army's Leader Development Strategy

FORMAT: Strategy Research Project

DATE: 24 March 2011 WORD COUNT: 7,116 PAGES: 36

KEY TERMS: Outcome Based Training and Education (OBTE), Agile and Adaptive Leaders, 360 Degree Assessment

CLASSIFICATION: Unclassified

The "Ways" of the Institutional Army's Leader Development Strategy must change to accomplish the stated "Ends," including developing agile and adaptive leaders. Specifically, the Institutional Army must change from strict reliance on task-based, input-focused "Ways" to incorporate a skills-based, outcome focused "Ways" to develop agile and adaptive leaders to face the challenges of the current and future environments. Developing agile and adaptive leaders who are critical thinkers is instrumental to the Army's successful conduct of Full Spectrum Operations in the 21st Century. This paper will explore the current and future operational environments, discuss why the Army requires agile and adaptive leaders for these environments, and why the institutional Army is resistant to change its "Ways" of producing such leaders. This paper will offer Outcome Based Training Education (OBTE) as the "Ways" for the Army to reach its "Ends", utilizing the Army Reconnaissance Course as a case study. The paper concludes with recommendations on how the Army, as an institution, should itself be agile and adaptive in making adjustments to help change its organizational culture, resulting in the sustained production of agile and adaptive leaders.

CHANGING THE "WAYS" OF THE INSTITUTIONAL ARMY'S LEADER DEVELOPMENT STRATEGY

The Army must adapt – and eliminate irrelevant policies, processes, and doctrines.¹

—GEN Schoomaker and R.L. Brownlee

The above quotation came from the Army's Fiscal Year 2005 Game Plan in which GEN Schoomaker, Chief of Staff of the Army, and R.L. Brownlee, Acting Secretary of the Army, gave strategic guidance and developed a campaign plan to guide Army Leaders in the development of the future Army. One of the seven key leadership objectives listed in the FY 2005 Game Plan was "Adapt the Institutional Army to Meet the Needs of the Emerging Operational Army."² It has been over six years since the publication of the FY 2005 Game Plan. How has the Army performed on this directive? The answer is pretty clear; not well at all. In the draft of The United States Army Learning Concept for 2015 Version 0.5 dated 15 June 2010, the opening paragraph states, "The current Army individual learning model is inadequate to meet this challenge."³ It goes on to say, "The purpose of the Army Learning Concept for 2015 (ALC 2015) is to describe an Army learning model that meets the all-volunteer Army's need to develop adaptive, thinking Soldiers and leaders capable of meeting the challenges of operational adaptability in an era of persistent conflict."⁴ The ALC 2015 goals and objectives are very similar to the FY 2005 Game Plan by GEN Schoomaker and Secretary Brownlee.

What happened? Why didn't the institutional Army adapt as prescribed? The FY 2005 Game Plan was clear in its two and half pages of specified guidance in which it identified over 30 objectives for changing the institutional Army processes.⁵ It was

especially clear with its first directive under the Leader Priorities, “understand the essentiality of the task we face – this is not business as usual. The Army can neither afford, nor sustain its current institutional practices.”⁶ GEN Schoomaker and Secretary Brownlee were on target in focusing on the institutional Army and leader development when they stated, “Education prepares Soldiers and leaders to operate in uncertain conditions, focusing more on “how to think.”⁷ “In light of the uncertain, irregular environments in which we will operate, ...we must emphasize innovative educational experiences...”⁸ The institutional Army leader development program, based on TRADOC Regulation 350-70, designed and resourced based on the tasks of ‘what to think,’ versus skills of ‘how to think,’ must change to adapt to meet the challenges of the 21st Century operational environment.

The FY 2005 Game Plan and the Draft ALC 2015, however, fall short in implementing successful and long lasting change. Though both gave clear strategic vision and clearly defined the outcomes that they were seeking, they failed to provide a vehicle or a “Way” to implement systematic change in the Institutional Army and both failed to address the Army’s resistance to change its leader development process. How does the Army change its leader development process when the people charged to make the change are emotionally attached to the process that has made them successful? Where is the incentive to change if you believe the current process is successful and that the Army is accomplishing its missions? Many of the brigade and battalion commanders of today were shaped as junior officers during the post Cold War success of Operations Just Cause and Desert Storm; an era of a known order of battle and centralized operations.⁹ The Army has also been quite busy manning the war. As

Secretary Gates points out, “The institutional Army, for the better part of the past decade has understandably, and appropriately, been consumed by “force generation” – manning units for deployment to Iraq and Afghanistan in response to the orders of America’s civilian leadership.”¹⁰

The “Ways” of the Institutional Army’s Leader Development Strategy must change to accomplish the stated “Ends,” including developing agile and adaptive leaders. Specifically, the Institutional Army must change from strict reliance on task-based, input-focused “Ways” to incorporate a skills-based, outcome focused “Ways” to develop agile and adaptive leaders to face the challenges of the current and future environments. Developing agile and adaptive leaders who are critical thinkers is instrumental to the Army’s successful conduct of Full Spectrum Operations in the 21st Century. This paper will explore the current and future operational environments, discuss why the Army requires agile and adaptive leaders for these environments, and why the institutional Army is resistant to change its “Ways” of producing such leaders. This paper will offer Outcome Based Training Education (OBTE) as the “Ways” for the Army to reach its “Ends,” utilizing the Army Reconnaissance Course as a case study. The paper concludes with recommendations on how the Army, as an institution, should itself be agile and adaptive in making adjustments in its leadership doctrine, evaluation reports and assignment procedures to help change its organizational culture, resulting in the sustained production of agile and adaptive leaders.

21st Century Operating Environment Challenges

President Obama outlined the challenges and the spectrum of threats that face the U.S. in the 21st Century, “We do not have the luxury of deciding which challenges to

prepare for and which to ignore. We must overcome the full spectrum of threats—the conventional and the unconventional; the nation-state and the terrorist network; the spread of deadly technologies and the spread of hateful ideologies; 18th century-style piracy and 21st century cyber threats.”¹¹

The U.S. Army must be prepared to answer the nation’s call to respond to the spectrum of challenges of the 21st Century: “Between now and the 2030s, the military forces of the United States will almost certainly find themselves involved in combat. Such involvement could come in the form of a major regular conflict or in a series of wars against insurgencies.”¹² How does the U.S. Army prepare for the 21st Century challenges with the spectrum of threats? “One of the great problems that confronts American strategists and military planners is the conundrum of preparing for wars that remain uncertain as to their form, location, level of commitment, the contribution of potential allies, and the nature of the enemy.”¹³ Many military planners believe that the military must prepare for the most dangerous end of the spectrum, “There are two particularly difficult scenarios that will confront joint forces between now and the 2030s. The first and most devastating would be a major war with a powerful state or hostile alliance of states.”¹⁴ Others believe the military must prepare for the most likely threat along the spectrum, “The second scenario of particular significance confronting the Joint Force is the failure to recognize and fully confront the irregular fight that we are in.”¹⁵ In either scenario the challenge to prepare for the future is great, “The requirement to prepare to meet a wide range of threats is going to prove particularly difficult for American forces in the period between now and the 2030s. The difficulties involved in

training to meet regular and nuclear threats must not push preparations to fight irregular war into the background, as occurred in the decades after the Vietnam War.”¹⁶

Though hard to predict the future environment, the recent populist uprisings in the Middle East are great examples of its dynamic nature, “The future operating environment will be characterized by uncertainty, complexity, rapid change, and persistent conflict.”¹⁷ Unfortunately, the U.S. Army does know that no matter how much effort goes into predicting the next conflict, its history indicates that it will be wrong. Secretary Gates highlights the Army’s record of predicting the next conflict, “when it comes to predicting the nature and location of our next military engagements, since Vietnam, our record has been perfect. We have never once gotten it right, from the Mayaguez to Grenada, Panama, Somalia, the Balkans, Haiti, Kuwait, Iraq, and more – we had no idea a year before any of these missions that we would be so engaged.”¹⁸

Operational Adaptability

What does our Joint Operational Framework state that must be done in this dynamic environment of the 21st Century? The Army is accomplishing its missions now and has had success in the past, why must it change? “As capable as our joint forces are today, this will not be enough to meet future challenges as described in this concept. We will need to select, educate, train, equip and manage our people differently.”¹⁹

What is needed? What should the U.S. Army do to meet the challenges of Full Spectrum Operations in the 21st Century if it is unable to accurately predict the future conflicts? The Army Capstone Concept (ACC) states, “Army leaders and future forces must develop operational adaptability—a quality that Army leaders and forces exhibit

based on critical thinking, comfort with ambiguity and decentralization, a willingness to accept prudent risk, and an ability to make rapid adjustments based on a continuous assessment of the situation.”²⁰

To meet this operational adaptability the U.S. Army must change the way it is currently producing its leaders. It needs a leader development system that produces agile and adaptive leaders. As the ACC states the Army needs to demonstrate its operational adaptability by, “Designing forces and educating leaders to adapt quickly to changing conditions, however, will permit Army forces to recover from surprise and exploit unforeseen opportunities.”²¹ General Dempsey, TRADOC Commander, emphasizes that the status quo will no longer work, “We must think differently about how we develop leaders and how we organize, train, and equip our soldiers and units.”²²

Adapting the Institutional Army

Why is adaptability so important? What are the specific changes needed for the Institutional Army? The ACC highlights the changes and describes the required pace of change, “Leaders in the generating force must be able to think critically about the implications of a continuously evolving operational environment and threats to national security. The generating force must continually assess and adapt at a pace faster than before.”²³ The ACC identifies the specific aspects of the Institutional Army that needs changing, “The Army must refine its capability to adapt training to the mission, threat, or operational environment changes while ensuring that individual and collective training fosters adaptability, initiative, and confidence.”²⁴ General Dempsey highlights the importance in adapting the Institutional Army to face the challenges of the 21st Century: “There are no crystal balls that can predict the demands of future armed conflict. That

is why I believe our ability to learn and adapt rapidly is an institutional imperative.”²⁵

The dynamic and complex operating environment of the 21st Century requires a U.S. Army strategy review of how it is now optimized for success versus its previous Cold War focus. The Army Leader Development Strategy discusses how the institution must now be optimized for a new norm of uncertainty. “Institutional policies and processes optimized for a world of mass and rapid decisive campaigns against predictable peer competitors must adapt to the new norm of uncertainty and protracted conflict.”²⁶

Leader development is not only about the dynamic operating environment, it is also about the adaptive enemy. “Our enemies – regular and irregular – will be well armed, well trained, well equipped, and often ideologically inspired. We must overmatch their training with our training and with the development of our leaders. They will be patient, and they will adapt.”²⁷ Speed of adaptation is a competitive edge, “We must learn faster, understand better, and adapt more rapidly. Our enemies will decentralize, partner, and network to form syndicates of threats against us.”²⁸ How will the Army sustain a competitive edge against an adaptive enemy in the 21st Century? “To succeed in this increasingly competitive learning environment, the Army requires leaders and organizations that can understand and adapt more quickly than their adversaries.”²⁹ Therefore, both the Army, as an institution and the Institutional Army Leader Development process must adapt to meet the challenges of the dynamic environment of the 21st Century.

General Dempsey prioritizes the importance of changes of leader development for the Army: “The most important adaptations will be in how we develop the next generation of leaders, who must be prepared to learn and change faster than their

future adversaries. Simply put, developing these adaptive leaders is the number-one imperative for the continued health of our profession.”³⁰ The Army must adapt during some upcoming fiscal challenges. The U.S. Army may not always have the resources to dominate across the Full Spectrum of Operations in the future environment. The Army Leader Development Strategy (ALDS) outlines the competitive environment implications, “The increasing competitiveness of the future security environment suggests that we may not be able to dominate everywhere and within and across all dimensions of the spectrum of conflict as we have for the past quarter century.”³¹ This competitive environment increases the requirement of both an agile Institutional Army and agile and adaptive leaders for the Army, “We must remain capable of dominating at times and in places of our choosing. Moreover, this increasing competitiveness exists in an environment of increasing complexity requiring leaders who are confident, versatile, adaptive, and innovative...We seek to develop leaders who will thrive in this environment.”³² General Dempsey emphasizes the importance of leader development, “What I also promise, however—and this, too, is confirmed by our history—is that it is always the leaders on point who are able to take what we give them, adapt to the environment in which they are placed and accomplish the mission. Leader development becomes job number one.”³³

Agile and Adaptive Leaders Defined

General Dempsey summarizes the requirement for the Army: “Our Army leader development strategy articulates the need to produce agile and adaptive leaders.”³⁴ What does it mean to be an agile and adaptive leader? Many descriptions exist, including in doctrinal as well as professional writings. According to FM 6-22, an

adaptable leader has the ability to "recognize changes in the environment, identify the critical elements of the new situation, and trigger changes accordingly to meet new requirements."³⁵ BG Longo and BG Funk described adaptive leaders as, "leaders who have the cognitive, interpersonal and cultural skills to be adaptive in complex tactical and strategic environments."³⁶ Dr. Leonard Wong states, "Adaptive leaders learn to live with unpredictability. They spend less time fretting about the inability to establish a routine or control the future and focus more on exploiting opportunities."³⁷ The Chief of Staff of the Army, GEN Casey highlights the need for agile and adaptive leaders, "Leadership is of paramount importance, and land forces must continue to develop agile and adaptive leaders who can handle the challenges of full spectrum operations."³⁸

It is not only the military that is looking for agile and adaptive leaders. The civilian community, when analyzing the complex and quick- changing operating environment of the computer software business community, also values the term agile and adaptive leaders. In the software community efforts 'are much more likely to be conducted in more volatile environments, as organizations adapt to changing technology, markets, and social conditions' at "Internet speed." They have recognized the need for agile and adaptive leadership for a competitive edge. They are looking for leaders that have the ability to manage and adapt to changing conditions and have the ability to solve problems.³⁹

Implementing Army Leader Development for the Challenges of the 21st Century

In November of 2009, the Army published its Army Leader Development Strategy (ALDS). The ALDS did not go in depth of all the tasks that it wants its leaders to perform but instead it focused on the skills, attributes and intangibles that it wants from

its leaders. “An uncertain and complex future security environment demands that Army leader development prepare leaders to operate with competence and confidence in ambiguous, frequently changing circumstances.”⁴⁰ General Dempsey goes into more detail at the focus point of the Army training and education, “The training and education of our entire force must aim to develop the mindset and requisite knowledge, skills, and abilities required to operate effectively under conditions of uncertainty and complexity.”⁴¹

The Army must also account for these types of personnel joining its ranks when implementing its leader development strategy. “The Army’s individual, collective, and leader training programs must not only transmit the required knowledge, skills, and abilities, they must do so in a manner that is suited to the learning style and preferences of a new generation of young Americans such that the All-Volunteer Army remains an attractive alternative.”⁴² The Army also must challenge this generation of young leaders, “What I’m suggesting here, however, is that our leader development programs must also produce and reward leaders who are inquisitive, creative and adaptable.”⁴³ These young leaders that are joining the Army today want to solve problems, not just conduct tasks. They are comfortable working in a collaborative environment. The Army must leverage these traits, “Develop innovative and adaptive leaders down to the lowest levels...Leader development, professional military education in particular, must specifically provide training and education that facilitates flexible and creative problem solving.”⁴⁴ With the recent preponderance of stability operations and the decentralized nature of these types of operations, the Army must focus on junior leaders. “Junior leaders must demonstrate technical and tactical proficiency, but they also require the

maturity, judgment, and confidence to develop creative solutions to ill-structured problems.”⁴⁵

Current Institutional Army task-based, input-focused "Ways"

TRADOC Regulation 350-70 is the documentation the Institutional Army uses to organize its training responsibilities. This document was initially developed in the Secretary of Defense McNamara era of the mid 1970s, with occasional minor adjustments over the years. The goal of the SAT process is to support the Army's mission by providing mission-focused, task-based training/education.⁴⁶ McNamara brought his expertise from Ford Motor Company in running an efficient, assembly line-based corporation to the Department of Defense. This business approach is a very bureaucratic, systematic, and efficient process that focuses on the inputs or resources that the institutional schools require to provide the appropriate training. TRADOC 350-70 also outlines specific required timelines to submit various changes to courses, up to three years in advance of instruction, which must be met to implement and resource changes in courses. In other words, the System Approach to Training (SAT) ensures that the students, facilities, ammunition, equipment and funds are all at the right time and right place to implement directed training.

The critical element in the SAT process is boiled down to tactical training tasks. This system uses training tasks as the unit of measure to ensure all resources are at the proper place at the proper time. Training developers, mostly Department of Army civilians or U.S. governmental contract personnel, are the critical players in acquiring the necessary resources to conduct the courses. The training developers select the proper tactical training tasks, and the corresponding environmental conditions and

performance standards for each task. In the SAT process, the training developers select approved tasks that must come from the SAT database to eventually be put in a course.

The SAT system was very effective for almost thirty years: from the mid 1970s until post invasion Iraq during OIF. The SAT task-based system was aligned with the 1976 U.S. Army doctrine, FM 100-5, on how to fight. “The Army--and thus FM 100-5--was structured and oriented on the Warsaw Pact as the most demanding mission the U.S. Army could be assigned. This 1976 doctrine focused on the Fulda Gap.”⁴⁷ During this Cold War era where the U.S. Army was focused on the General Defense Plan (GDP) of Western Europe, the Army had a very detailed plan that outlined what each Soldier and Leader was required to do to defeat the Soviet threat.

Task-centric and standards based training and education has served the U.S. Army well, as it does a superb job of presenting fact based and procedural information. Its systematic approach helps to produce reliability of task performance and can be often reproduce with limited instructor proficiency requirements.⁴⁸ What happens in this training system where the tactical tasks are not well defined or even predictable? What happens when conditions also change especially if operating with and closely among civilians? The Soldier or leader may have learned some information and has demonstrated technical task proficiency, but is he able to correctly apply his knowledge with the typical problems in a COIN mission?⁴⁹ The Army Learning Concept 2015 (ALC 2015) highlights some of the shortcomings of the current systematic system. “Current learning is typically instructor-led, timed to pre-determined course lengths, and not synchronized to meet individual learner needs. Current instruction is based on

individual “tasks, conditions, and standards” which worked well when the Army had a well-defined mission with a well-defined enemy.”⁵⁰ Due to the operational requirements of Iraq and Afghanistan, the Army has not effectively resourced instructors to the highest level, “The Army often assigns instructors arbitrarily, rather than through a selection process that accounts for subject matter expertise or aptitude to facilitate adult learning...With few exceptions, instructor positions are not perceived to be career-enhancing assignments.”⁵¹

TRADOC 350-70 also outlines the resourcing for Institutional Army training. This system is very antiquated and is focused on a brick and mortar classroom environment. ALC 2015 describes the shortcomings and the inflexibility in the resource of training. “Institutional resourcing models designed for a peacetime force are not adaptive to the evolving needs of the operational force in an era of persistent conflict. The current model incentivizes schools to maintain the “brick and mortar” mindset with a limited range of learning methodologies.”⁵² TRADOC 35-70 is also unresponsive to a dynamic operational environment, “In the current learning model, significant changes to learning programs require planning cycles of three to five years to implement, a timeframe that is not rapid enough to adapt to evolving operational demands.”⁵³ Until the institutional Army makes dramatic changes to TRADOC 350-70, the regulation that outlines “the Ways” of institutional leader development, there will continue to be a misalignment of the stated leader development strategy. General Dempsey highlights the need for a change in the Army Leader Development, “...we need to revise our existing learning models to provide relevant and realistic training and education for our soldiers and leaders.”⁵⁴

How to change “the Ways” of institutional leader development

General Dempsey also outlined a critical change that the institutional Army must make in improving the Army’s leader development program. “One is the need to move away from a platform-centric learning model to one that is centered more on learning through facilitation and collaboration. The “sage on the stage” will give way to the “guide on the side” who will facilitate learning and focus on problem solving in the classroom.”⁵⁵ (Feb issue Page 25-26, Dempsey is author) The other critical change is how the Army views professional military education, “these initiatives will work only if we consider our professional military education (PME) an investment in—and not a tax on the profession.”⁵⁶

The institutional Army must make major changes in “the Ways” of conducting leader development. Specifically, the Institutional Army must change from task-based, input-focused “Ways” to a skills based, outcome focused “Ways” to develop agile and adaptive leaders who will succeed when faced with the challenges of the current and future environments of the 21st Century. Utilizing Bloom’s Taxonomy will help to illustrate the significant difference between a task-based system to skills based system.

Bloom’s Taxonomy is often depicted as a hierarchy through which students are able to attain higher levels of “thinking.” In almost all circumstances when an instructor desires to move a group of students through a learning process utilizing an organized framework, Bloom’s Taxonomy can prove helpful. This taxonomy of learning behaviors can be thought of as the goals of the training process.

Here are the different objectives in Bloom’s Taxonomy:

- REMEMBER – The learner must be able to recall information, such as dates, events, places, ideas, definitions, formulas, theories, etc.
- UNDERSTAND – The learner must be able to grasp the meaning of the information, express it in their own words, and/or cite examples.
- APPLY – The learner must be able to use or apply knowledge or skills to new situations. The learner must be able to use information and knowledge to solve a problem, answer a question, or perform another task.
- ANALYZE – The learner must be able to break down knowledge into parts, and show and explain the relationships among the parts.
- EVALUATE – The learner must be able to judge or assess the value of material and methods for a given purpose.
- CREATE – The learner must be able to pull together parts of knowledge to form a new whole and build relationships for new situations.⁵⁷

With a task-based system, the student is often evaluated on Bloom's first two levels (Remember and Understand) and on his ability to apply his knowledge on predetermined tasks that he has prepared for. With a skills-based system, the student is often evaluated on Bloom's highest levels (Apply, Analyze, Evaluate and Create) and his ability to apply his skills to new situations that he may not have faced before. The focus of the skills-based system is on the student's ability to solve problems.

The COE has changed the operational Army, making it adapt and evolve in different, sometimes difficult and unexpected ways. Even as this forced adaptation occurs, everyone continues to urge the Army to be more adaptive, agile, and innovative. Even a shallow understanding of the Army operational concept of Full Spectrum

Operations (FSO) makes it clear that the way we used to train will no longer suffice. It seems clear that everyone understands the need for change. Though there is strategic leader vision and specified guidance to change the leader development process to meet the needs of the 21st Century. “The seeming slow pace of change has less to do with the quality of leader vision than it has to do with the details of implementation. It is not for any lack of understanding that the COE has imposed a requirement for change in both how and what we train.”⁵⁸ The awkward remaining obstacle is how can it be done? Bottom line is that the Institutional Army does not understand how to make the necessary changes. There has not been a vehicle or a “Way” identified to implement systematic change of leader development in the Institutional Army.⁵⁹

Outcome Based Training and Education (OBTE) the “Ways”

The Institutional Army should implement Outcome Based Training and Education (OBTE) as the “Ways” or methodology to produce agile and adaptive leaders to meet the challenges of the 21st Century. What is OBTE? “OBTE is an approach to planning, managing, and delivering training and education. It results in the attainment of a set of holistic, observable, and measurable skills and behavioral traits (outcomes) in individuals and units.”⁶⁰ Instead of having students conduct a series of distinct specific tasks, OBTE focuses on the development skills and intangibles in the student by having the student conduct problem solving scenarios.⁶¹ There is a significant difference between a task-based training system and OBTE training system. In a task-based system the focus is to teach leaders how apply approved doctrinal approach to specified problems, where in an OBTE system the focus is on teaching the leader how to frame problems and solve those, focusing on the results rather than the methods used to

obtain them. “It is thus designed to create thinking, adaptive Soldiers and leaders who are capable of applying what they know to solve problems they have previously not encountered.”⁶²

There is also a significant difference in the role of the instructor in the training process between the two systems. “OBTE relies heavily on the trainer’s growing expertise and ability and much less on scripts, standard procedures, or external controls...success is judged when the student or unit demonstrates they can solve a new problem to an acceptable level using their newly trained skills or knowledge.”⁶³ The conduct of training is also significantly different. In OBTE there is not a step by step process that must be followed in order to be successful. OBTE emphasis is on the skill development of the student recognizing that there is more than one way to be successful in solving a problem.⁶⁴

OBTE does not require any additional training resources to conduct the training. It does differ from task-based training as it focuses on the outcomes of the training versus inputs of training resources (miles, hours, rounds) used to determine training requirements. Trainers utilizing the OBTE methodology will need more flexibility on how to use their training resources to properly challenge their students based on the student’s ability. This does place additional responsibility on the trainer.⁶⁵

There are some significant differences in the conduct of OBTE methodology training versus the Army’s current task-based methodology. The following are some examples:

- Far more flexibility is granted to both teachers and students, with far fewer external controls. This requires an investment in training leaders (both on the skills and on how to teach).
- Training emphasizes principles rather than checklists, procedures, or standards.
- Training emphasizes the —why. Traditional Army training emphasizes the —what and —how, but too often neglects the —why.
- As students solve problems, and learn by doing, they are required to figure as much of it out for themselves as they are capable of. While it may take a bit longer to learn, the learning is deeper and retained longer. Students in OBTE are conditioned from the beginning to think and to solve problems.
- Mistakes in OBTE are treated as opportunities for learning to occur. Students are encouraged to try things for themselves and to learn from their mistakes. The leader's role is to make sure that the students analyze why something went wrong and to draw reasonable lessons from the experience.
- It relies much more on leaders' abilities, and so requires investment in better preparing leaders.
 - Finally, it will require a different method of allocating resources to training, and more flexibility in using them, since resources are currently matched to tasks being trained rather than to skills attained.⁶⁶(Haskins, OBTE)

Implementing OBTE

Integrating OBTE principles in training and education is a “Way” for the institutional Army to meet its goal of developing agile and adaptive leaders. With the dynamic operational environment of the 21st Century, the Army must transform from the

current task-based training system, as the Army admits it will not accurately be able to predict the environment or even the type of missions leaders will be given. With the recent preponderance of stability operations, there is a dramatic increase in the number of leader tasks required to successfully accomplish the mission. How much longer will our current leader development courses need to be under the task-based system to ensure future leaders are properly trained? Would it not be both more effective and efficient if the Institutional Army focused on a skill-based system like OBTE to develop its leaders for an uncertain future?⁶⁷

In developing leader training, one needs to focus on “what capability do I want my leaders to have at the conclusion of training” versus “what tasks do I want them to be able to perform under certain conditions.” In reality Soldiers want to accomplish a mission or solve a problem, not just perform a task. “Training and education that prepares Soldiers who are confident and will take initiative and not solely conditioned to respond to particular situations will certainly prove more resilient in more occasions. They will not be overwhelmed when faced with a new or unexpected situation.”⁶⁸

The Institutional Army needs to develop leaders to be prepared to deal with uncertainty and ambiguities while operating across the spectrum of operations. This type of development should focus on the necessary skills development for success. OBTE based training system provides the “Ways” to develop agile and adaptive leaders that can be ready for the dynamic 21st Century operational environment.⁶⁹

Army Reconnaissance Course (ARC), an example of OBTE in action

In 2007 the TRADOC Commanding General directed the creation of a single reconnaissance course to train all leaders assigned to Brigade Combat Teams (BCTs)

(Infantry, Stryker and Heavy BCTs). At that time, the U.S. Armor School taught a reconnaissance course, called Scout Leader Course (SLC) for leaders going to Heavy or Stryker BCTs while the U.S. Infantry School taught a reconnaissance course, Long Range Surveillance Course (LRSC), for leaders going to an Infantry BCT. At a meeting in February of 2007, both the Armor School and Infantry School decided that the Armor School would establish an Army Reconnaissance Course (ARC) to develop leaders going to the various BCTs. The Armor School conducted analysis of LRSC and SLC training to account for all the tasks taught by both courses. The Armor School determined that there would be a significant increase in the amount of training resources, especially time, to account for all tasks currently trained. The ARC would have to sustain ten of the current tasks trained, enhance six current tasks, and add eight new tasks to account for the dismounted reconnaissance tasks currently trained by LRSC for a total of 24 tasks. The Armor School RC decided to pursue an OBTE system approach instead of a task-based approach to properly train ARC students for reconnaissance.⁷⁰

The Armor School goal was to develop an OBTE course, ARC, which develops confident and agile reconnaissance leaders that can successfully confront an adaptive enemy. Specifically:

- Training to Grow Problem Solving
 - Teach Soldiers to “learn for themselves” the skills necessary to the success of their mission, within an established framework of knowledge
- Training to Increase Intangibles

- Develop intangible attributes like confidence, accountability, initiative, judgment and awareness; reinforce positive character traits
- Training to Increase Understanding and Awareness
 - Teach through contextual understanding of the task and its mission application
- Training to Increase Deliberate Thought
 - Condition Soldiers to exercise always a deliberate thought process (evaluation, judgment and decision) while under stress
- Training to Improve Combat Performance
 - Condition Soldiers to overcome the psychological and physiological effects, and the physical requirements of combat⁷¹

The desired outcome of the course was to produce reconnaissance leaders who are observably better than other Soldiers at reconnaissance tasks. The ARC focus was to foster the skills that will allow reconnaissance leaders to solve tactical problems. Through conversations with the operational Army the Armor School decided on seven critical reconnaissance leader skills to focus their training:

- Relevance of reporting
- Survivability and compromise
- Land navigation skills
- Asset employment – fires, air
- Intelligence Preparation of the Battlefield (IPB)
- Military aspects of culture
- Integration of new technologies⁷²

The Armor School then outlined the desired outcomes for ARC Graduates:

- Observably higher skills at recon, surveillance, security fundamentals – navigation, communications and reporting, “IPB”
- Better understanding of higher commanders’ info requirements, how to find, and communicate info
- Better at planning and executing without mission compromise or loss of freedom of action
- More competent with employment of organic and attached assets – air, ground, technical
- More confident at problem-solving, deliberate thought, anticipation, initiative, risk management ⁷³

The ARC course design was based around the conduct of various reconnaissance, security and surveillance missions in which students focused on:

- Continuous practice of:
 - Troop Leading Procedures
 - Land Navigation Skills
 - Communications and Reporting
 - Anticipation—“100M IPB”
 - Application of Planning Factors⁷⁴

While the Cadre focused on:

- Continuous Assessment of:
 - Initiative
 - Understanding Commander’s Intent

- Problem-Solving
- Decision Making and Communicating
- Mission Risk Management⁷⁵

Besides a skill-based focus course instead of a task-based course, there were other differences in the conduct of the ARC versus the previous Scout Leader Course or other task-based courses:

- Most of the training was taught in the “field classroom” instead of the brick and mortar “classroom,” 17 of 27 days were spent in the field
- Students were not given packing lists for field training but told to bring what was needed to accomplish the mission
- Physical training was linked to problem solving requirements; endurance runs/ruck marches with navigation, comms and obstacles breaching requirements
- Students were not allowed to use standard checklist
- Students were given various vehicle platforms of none at all to see how they would adjust their execution based on the platforms
- Students were given access to various non organic reconnaissance and surveillance assets to see how they would incorporate their capabilities⁷⁶

Another significant difference in the OBTE system ARC course versus a task-based course was the assessment of student performance. ARC utilized a 360 degree assessment after each of the three field training exercises wherein the student conducted a self assessment of his performance, his peers conducted an assessment

of his performance, and then his mentor or Cadre provided an assessment. The mentor or Cadre focused on the following:

- Student ability to make a decision based on conditions
- Student ability to communicate decision – orders/reports
- Student technical and tactical proficiency
- Observable demonstration of desired outcomes

The self and peer assessment was based on:

- Can “x” make decisions under pressure?
- Is “x” an effective communicator – orders, instructions, reports?
- Is “x” technically and tactically proficient – navigation, comms, IPB, planning, execution, new assets?⁷⁷

The results of the ARC have been outstanding. Mentors or Cadre have continually made adjustments to improve the course and enjoy the opportunity to be mentors. They quickly develop strong ties to their students and to their profession. Students leave the course fully aware of their abilities and areas that they need to improve on and have a mentor to help them create a personal development plan to sustain their strengths and improve their weaknesses. More importantly, the students leave the course confident they are ready to face the challenges of the 21st Century. This was evident by a recent ARC graduate's comments:

Through my basic officer course, I had gained a very small fundamental idea of what reconnaissance was and how it should be conducted. All of the basic concepts and checklists were given to me and I was tested on them. Overall, I felt I had learned a lot about what reconnaissance was and how it was to be applied in our modern wars. Then, however, I came to the Army Recon Course where checklist and fundamentals went from being teaching material to being implied tasks and skills. The focus changed from learning the tangible skills to learning how to apply them,

and most importantly, how to use them to solve problems.

The concept of reconnaissance had been reshaped from a textbook application of doctrine to a problem that was only going to be solved through my understanding and skills. This approach to reconnaissance has opened a whole new spectrum of unlimited learning opportunities to me. It has gone from "what is the answer to this problem based on what others have told me", to "how am I going to use what I know, what I have learned, and what I have available to me to solve this problem." This course has been a sort of tactical laboratory, in that the resources, time, and space are given to us to develop our reconnaissance skills. In effect, allowing us to not only learn from others, but more importantly learn from experience and from ourselves.

The most important thing that I will have been able to take away from this course thus far, in the solving of recon and security problems, is knowing exactly what those problems even are. Once I know what problems to expect, I can use my knowledge and experience from this course, along with the wealth of NCO knowledge and experience at my unit, to anticipate these problems and plan for them accordingly. But, even when events occur that I will not have been able to plan for, or that were overlooked, I will not have to think about what the FM would tell me to do. I will be able to use my problem solving skills, along with those of my NCO's and soldiers, to accomplish my mission no matter the problems that arise.⁷⁸

Conclusion

The Army Reconnaissance Course graduate's comments cited above epitomize the outcomes and experiences we expect from our training and education systems as we develop the agile and adaptive leaders the U.S. Army needs for the dynamic challenges of the 21st Century. He seems to have the confidence and critical thinking ability to operate across the full spectrum of operations. More importantly, though, he is demonstrating his ability on "how to think." As Secretary Gates stated recently at his speech at West Point, "The military will not be able to train or educate you to have all the right answers – as you might find in a manual – but you should look for those experiences and pursuits in your career that will help you at least ask the right questions." The U.S. Army senior leadership has identified the goal for the future of leader development: develop agile and adaptive leaders who are critical thinkers and

know how to ask the right questions. It is time for the institutional Army to be an agile and adaptive institution itself and change the “Ways” of leader development and replace the task-based training system to an OBTE based system to accomplish the stated “Ends” of developing agile and adaptive leaders. Changing the “Ways” of leader development represents a significant culture shift for the institutional Army, requiring leadership and other adjustments to ensure that the change is implemented.

Specifically:

- OBTE-based training system emphasizes the importance of highly-qualified instructors to mentor our future leaders. The Army must properly resource instructor positions with high quality combat veterans.

- The Army should reinforce the importance of agile and adaptive leadership by including these qualities on leader evaluations (NCOERs and OERs). This will ensure that the leaders receive mentor counseling on these attributes.

- The Army should also look at broadening assignments and educational opportunities to allow leaders the opportunity to gain new and different experiences, thus enhancing their ability to deal in complex and ambiguous environments.

- The Institutional Army must make changes to its course accreditation process. Emphasis of assessment of the course must shift from the input or resources of the course to the outcomes produced by the courses. The outdated accreditation process and input focused inspections are hindering training developers from making necessary changes to achieve desired course outcomes.

The Army Learning Concept 2015 (ALC 2015) is blunt about the need for change, “The Army will not prevail in the competitive global learning environment unless

it sheds outmoded processes and models and replaces them with a more adaptive learning model.”⁷⁹ (ALC PAGE 4) *The OBTE* is that more adaptive learning model that ALC 2015 calls for in order to produce agile and adaptive leaders in the competitive global learning environment. Will the institutional Army be an agile and adaptive institution and make the changes in the “Ways” of developing leaders for the 21st Century?

Endnotes

¹ Peter J. Schoomaker and R.L. Brownlee, *Our Army at War – Relevant and Ready...Today and Tomorrow. A Game Plan for Advancing Army Objectives in FY05 and Beyond: Thinking Strategically*, (Washington, D.C. Department of the Army, 28 October 2004), 1.

² *Ibid.*, 4.

³ TRADOC Pamphlet 525-X-X, *The United States Army Learning Concept for 2015*, Version 0.5 (Fort Monroe, VA, Training and Doctrine Command, 15 June 2010), 1.

⁴ *Ibid.*

⁵ Peter J. Schoomaker, 19.

⁶ *Ibid.*, 21.

⁷ *Ibid.*, 6.

⁸ *Ibid.*

⁹ Blaise Cornell d'Echert, “*Chapter 15. Five ways OBTE can enable the Army Leader Development Strategy*,” in, *An Initiative in Outcomes-Based Training and Education: Implications for an Integrated Approach to Values-Based Requirements*, ed. Gary Riccio, Fred Diedrich, Michael Cortes (Ft. Meade, MD Asymmetric Warfare Group, 2010), 243-244.

¹⁰ U.S. Secretary of Defense Robert M. Gates, “Future of the Army” (Keynote address 2011 United States Military Academy, West Point, NY, February 25, 2011) <http://www.defense.gov/speeches/speech.aspx?speechid=1539> (Accessed March 16, 2011).

¹¹ President Barak Obama, “2009 Commencement Address at U.S. Naval Academy,” (May 22, 2009) available at http://www.whitehouse.gov/the_press_office/Remarks-by-the-President-at-US-Naval-Academy-Commencement/ (Accessed March 16, 2011).

¹² U.S. Joint Forces Command, *The Joint Operating Environment 2010*, (Suffolk, VA: U.S. Joint Forces Command, February 18, 2010), 62.

¹³ Ibid.

¹⁴ Ibid.

¹⁵ Ibid.

¹⁶ Ibid.

¹⁷ U.S. Joint Chiefs of Staff, *Capstone Concept for Joint Operations Version 3.0*, (Washington, DC: U.S. Joint Chiefs of Staff, January 15, 2009), 2.

¹⁸ Robert M. Gates, "Future of the Army", February 25, 2011.

¹⁹ U.S. Joint Chiefs of Staff, *Capstone Concept for Joint Operations Version 3.0*, (Washington, DC: U.S. Joint Chiefs of Staff, January 15, 2009), 4.

²⁰ U.S. Army Training and Doctrine Command, *The Army Capstone Concept Operational Adaptability: Operating under Conditions of Uncertainty and Complexity in an Era of Persistent Conflict 2016-2028*, (Fort Monroe, VA: U.S. Army Training and Doctrine Command, December 21, 2009), 16.

²¹ Ibid.

²² Martin E. Dempsey, "A Dialogue About Our Army: A Campaign of Learning To Achieve Institutional Adaptation," *Army Magazine* 60, no. 11 (November 2010): 34.

²³ U.S. Army Training and Doctrine Command, *The Army Capstone Concept Operational Adaptability*, 31.

²⁴ Ibid., 30.

²⁵ Martin E. Dempsey, "A Dialogue About Our Army: A Campaign of Learning To Achieve Institutional Adaptation," 35.

²⁶ U.S. Department of Army, *Army Leader Development Strategy*, (Washington, DC: U.S. Department of the Army, November 25, 2009), 5.

²⁷ Ibid., 1.

²⁸ Ibid.

²⁹ U.S. Army Training and Doctrine Command, *The United States Army Operating Concept 2016-2028*, (Fort Monroe, VA: U.S. Army Training and Doctrine Command, August 19, 2010), 34.

³⁰ Martin E. Dempsey, "Leader Development," *Army Magazine* 61, no. 2 (February 2011): 28.

³¹ U.S. Department of Army, *Army Leader Development Strategy*, 31.

³² Ibid., 3.

- ³³ Martin E. Dempsey, "Leader Development," 26.
- ³⁴ Martin E. Dempsey, "A Dialogue About Our Army: A Campaign of Learning To Achieve Institutional Adaptation," 36.
- ³⁵ U.S. Department of Army, *FM 6-22: Army Leadership: Competent, Confident, and Agile*, (Washington, DC: U.S. Department of the Army, October 12, 2006), 10-8.
- ³⁶ BG Richard C. Longo and BG Paul E. Funk II, "Developing Adaptable Soldiers, Leaders and Units to Meet the Challenge of Persistent Conflict," *Army Magazine* 61, no. 3 (March 2011): 46.
- ³⁷ Leonard Wong, *Developing Adaptive Leaders: The Crucible Experience of Operation Iraqi Freedom*, U.S. Army War College Study, July 2004, 11.
- ³⁸ U.S. Army Training and Doctrine Command, *The United States Army Operating Concept 2016-2028*, (Fort Monroe, VA: U.S. Army Training and Doctrine Command, August 19, 2010), 34.
- ³⁹ Sanjiv Augustine, Bob Payne, Fred Sencindiver, and Susan Woodcock, "Agile Project Management: Steering From The Edges", *Communications of the ACM - The semantic e-business vision*, Volume 48 Issue 12, December 2005, 85-87.
- ⁴⁰ U.S. Department of Army, *Army Leader Development Strategy*, 15.
- ⁴¹ U.S. Army Training and Doctrine Command, *The Army Capstone Concept Operational Adaptability*, i-ii.
- ⁴² U.S. Army Training and Doctrine Command, *The United States Army Operating Concept 2016-2028*, 35.
- ⁴³ Martin E. Dempsey, "Leader Development", 26.
- ⁴⁴ U.S. Joint Chiefs of Staff, *Capstone Concept for Joint Operations Version 3.0*, 33-34.
- ⁴⁵ U.S. Army Training and Doctrine Command, *The United States Army Operating Concept 2016-2028*, 37.
- ⁴⁶ U.S. Army Training and Doctrine Command, *TRADOC Pam 350-70 Systems Approach to Training Management, Processes, and Products*, (Fort Monroe, VA: U.S. Army Training and Doctrine Command, March 9, 1999), ES2.
- ⁴⁷ COL Gregory Fontenot, "Mission Command: An Old Idea for the 21st Century", *Army Magazine* 61, no. 3 (March 2011): 66.
- ⁴⁸ Blaise Cornell d'Echert, "Chapter 15. Five ways OBTE can enable the Army Leader Development Strategy," in, *An Initiative in Outcomes-Based Training and Education: Implications for an Integrated Approach to Values-Based Requirements*, ed. Gary Riccio, Fred Diedrich, Michael Cortes (Ft. Meade, MD Asymmetric Warfare Group, 2010), 250-252.

⁴⁹ Ibid.

⁵⁰ U.S. Army Training and Doctrine Command, *TRADOC Pam 525-8-2 The U.S. Army Learning Concept for 2015*, (Fort Monroe, VA: U.S. Army Training and Doctrine Command, January 20, 2011), 2-3.

⁵¹ Ibid.

⁵² Ibid., 3-4.

⁵³ Ibid.

⁵⁴ Martin E. Dempsey, "A Dialogue About Our Army: A Campaign of Learning To Achieve Institutional Adaptation," 36.

⁵⁵ Martin E. Dempsey, "Leader Development", 26.

⁵⁶ Ibid., 25-26.

⁵⁷ Brandon Betancourt, "*Bloom's Taxonomy in a Medical Practice*," Pediatric Inc, (October 30, 2009) <http://pediatricinc.wordpress.com/2009/10/30/blooms-taxonomy-in-a-medical-practice/> (Accessed March 16, 2011).

⁵⁸ Blaise Cornell d'Echert, "*Chapter 15. Five ways OBTE can enable the Army Leader Development Strategy*," 243.

⁵⁹ Ibid., 243-244.

⁶⁰ Casey Haskins, "Appendix C: A Commander's View of Outcomes-Based Training and Education," in, *An Initiative in Outcomes-Based Training and Education: Implications for an Integrated Approach to Values-Based Requirements*, ed. Gary Riccio, Fred Diedrich, Michael Cortes (Ft. Meade, MD Asymmetric Warfare Group, 2010), 342.

⁶¹ Ibid.

⁶² Ibid.

⁶³ Ibid.

⁶⁴ Ibid.

⁶⁵ Ibid.

⁶⁶ Ibid., 344-345.

⁶⁷ Blaise Cornell d'Echert, "*Chapter 15. Five ways OBTE can enable the Army Leader Development Strategy*," 251.

⁶⁸ Ibid.

⁶⁹ Ibid., 243-244.

⁷⁰ Kevin McEnery, "ARC Recon Course Brief," briefing slides, Fort Knox, KY, U.S. Army Armor School, March 18, 2008.

⁷¹ Ibid.

⁷² Ibid.

⁷³ Ibid.

⁷⁴ Ibid.

⁷⁵ Ibid.

⁷⁶ Ibid.

⁷⁷ Ibid.

⁷⁸ Leopoldo Quintas, e-mail message to author, March 15, 2010.

⁷⁹ U.S. Army Training and Doctrine Command, *TRADOC Pam 525-8-2 The U.S. Army Learning Concept for 2015*, 4.

